

Amendments to the Claims

1. (Currently Amended) A process for producing pearlite from an iron containing article having less than 0.77 wt% carbon comprising the steps of, (a) heating an iron containing article comprising at least 50 wt % iron and less than 0.77 wt% carbon for a time and at a temperature sufficient to convert at least a portion of said article from a ferritic structure to an austenitic structure, (b) exposing said austenitic structure, for a time sufficient and at a temperature of about 727 to about 900°C, to a carbon supersaturated CO/H₂ environment consisting essentially of CO and 10 to 50 vol% H₂, and having a carbon activity greater than about 1, to diffuse carbon into said austenitic structure and (c) cooling said iron containing article to form a continuous pearlite structure.

2. (Original) The process of claim 1 wherein said iron containing article further comprises silicon, manganese, and mixtures thereof.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Original) The process of claim 1 wherein said time sufficient to diffuse carbon into the austenitic structure ranges from about 1 minute to about 50 hours.

7. (Original) The process of claim 6 wherein said thickness of pearlite is at least about 10 microns.

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8. (Cancelled)

9. (Cancelled)